

CLAIMS

What is claimed is:

- 1 1. A method for providing broadcast discovery in a network having one or more  
2 1394 buses, the method comprising the steps of:
  - 3 generating advertised discovery information by devices connected to a bus upon  
4 either a reset of said bus or a receipt of a solicit packet sent to all devices in the network  
5 by a discovering device, said solicit packet containing either a global bus identifier or a  
6 bus identifier associated with said bus;
  - 7 receiving the advertised discovery information of the devices by the discovering  
8 device; and
  - 9 maintaining a list of devices and services included within the devices based on the  
10 advertised discovery information received by the discovering device.
- 1 2. The method of claim 1 wherein a network having one or more 1394 buses further  
2 comprises a non-1394 network connected to the one or more 1394 buses.
- 1 3. The method of claim 1 wherein a device in the network can be a consumer  
2 electronic device, a peripheral device, a cable modem, or a personal computer.
- 1 4. The method of claim 2 wherein the non-1394 network simulates a bus with a bus  
2 identifier equal to a simulated bus identifier.

1    5.    The method of claim 1 wherein said solicit packet containing the global bus  
2    identifier initiates all devices in the network to send the advertised discovery information  
3    to the discovering device.

1    6.    The method of claim 1 wherein said solicit packet containing the bus identifier  
2    associated with said bus initiates only devices connected to said bus to send the  
3    advertised discovery information to the discovering device.

1    7.    The method of claim 1 wherein the advertised discovery information includes  
2    device and service information.

1    8.    An apparatus for providing broadcast discovery in a network having one or more  
2    1394 buses, the apparatus comprising:

3                means for generating advertised discovery information by devices connected to a  
4    bus upon either a reset of said bus or a receipt of a solicit packet sent to all devices in the  
5    network by a discovering device, said solicit packet containing either a global bus  
6    identifier or a bus identifier associated with said bus;

7                means for receiving the advertised discovery information of the devices by the  
8    discovering device; and

9                means for maintaining a list of devices and services included within the devices  
10   based on the advertised discovery information received by the discovering device.

1    9.    The apparatus according to claim 8 wherein a network having one or more 1394  
2    buses further comprises a non-1394 network connected to the multiple 1394 buses.

1    10.   The apparatus according to claim 8 wherein a device in the network can be a  
2    consumer electronic device, a peripheral device, a cable modem, or a personal computer.

1    11.   The apparatus according to claim 9 wherein the non-1394 network simulates a bus  
2    with a bus identifier equal to a simulated bus identifier.

1    12.   The apparatus according to claim 8 wherein the means for generating advertised  
2    discovery information by devices connected to a bus further comprises:

3        means for sending said solicit packet containing the global bus identifier to all  
4    devices in the network; and

5        means for initiating all devices in the network to send the advertised discovery  
6    information to the discovering device.

1    13.   The apparatus according to claim 8 wherein the means for generating advertised  
2    discovery information by devices connected to a bus comprises:

3        means for sending said solicit packet containing the bus identifier associated with  
4    said bus to all devices in the network; and

5 means for initiating only devices connected to said bus to send the advertised  
6 discovery information to the discovering device.

1 14. The apparatus according to claim 8 wherein the advertised discovery information  
2 includes device and service information.

1 15. An apparatus for providing broadcast discovery in a network having one or more  
2 1394 buses, the apparatus comprising:

3 an information generator for generating advertised discovery information by  
4 devices connected to a bus upon either a reset of said bus or a receipt of a solicit packet  
5 sent to all devices in the network by a discovering device, said solicit packet containing  
6 either a global bus identifier or a bus identifier associated with said bus;

7 an information receiver for receiving the advertised discovery information of the  
8 devices by the discovering device; and

9 a list maintainer for maintaining a list of devices and services included within the  
10 devices based on the advertised discovery information received by the discovering device.

1 16. The apparatus according to claim 15 wherein a network having one or more 1394  
2 buses further comprises a non-1394 network connected to the one or more 1394 buses.

1 17. The apparatus according to claim 15 wherein a device in the network can be a  
2 consumer electronic device, a peripheral device, a cable modem, or a personal computer.

1   **18.**   The apparatus according to claim 16 wherein the non-1394 network simulates a  
2   bus with a bus identifier equal to a simulated bus identifier.

1   **19.**   The apparatus according to claim 15 wherein the information generator  
2   comprises:

3                 a solicitor for sending said solicit packet containing the global bus identifier to all  
4   devices in the network; and

5                 a device initiator for initiating all devices in the network to send the advertised  
6   discovery information to the discovering device.

1   **20.**   The apparatus according to claim 15 wherein the information generator  
2   comprises:

3                 a solicitor for sending said solicit packet containing the bus identifier associated  
4   with said bus to all devices in the network; and

5                 a device initiator for initiating only devices connected to said bus to send the  
6   advertised discovery information to the discovering device.

1   **21.**   The apparatus according to claim 15 wherein the advertised discovery information  
2   includes device and service information.

1   **22.** A machine readable medium having embodied thereon instructions, which when  
2   executed by a machine, causes the machine to:

3                 provide broadcast discovery in a network having one or more 1394 buses, the  
4   instructions comprising:

5                         a first set of instructions for generating advertised discovery information  
6   by devices connected to a bus upon either a reset of said bus or a receipt of a  
7   solicit packet sent to all devices in the network by a discovering device, said  
8   solicit packet containing either a global bus identifier or a bus identifier associated  
9   with said bus;

10                         a second set of instructions for receiving the advertised discovery  
11   information of the devices by the discovering device; and

12                         a third set of instructions for maintaining a list of devices and services  
13   included within the devices based on the advertised discovery information  
14   received by the discovering device.

1   **23.** The machine readable medium according to claim 22 wherein the network having  
2   one or more 1394 buses further comprises a non-1394 network connected to the one or  
3   more 1394 buses.

1   **24.** The machine readable medium according to claim 22 wherein a device in the  
2   network can be a consumer electronic device, a peripheral device, a cable modem, or a  
3   personal computer.

1   **25.**   The machine readable medium according to claim **23** wherein the non-1394  
2   network simulates a bus with a bus identifier equal to a simulated bus.

1   **26.**   The machine readable medium according to claim **22** wherein the first set of  
2   instructions for generating advertised discovery information by devices connected to a  
3   bus further comprises instructions for sending said solicit packet containing the bus  
4   identifier associated with said bus to all devices in the network and instructions for  
5   initiating only devices connected to said bus to send the advertised discovery information  
6   to the discovering device.

1   **27.**   The machine readable medium according to claim **22** wherein the first set of  
2   instructions for generating advertised discovery information by devices connected to a  
3   bus further comprises instructions for sending said solicit packet containing the global  
4   bus identifier to all devices in the network and instructions for initiating all devices in the  
5   network to send the advertised discovery information to the discovering device.

1   **28.**   The machine readable medium according to claim **22** wherein the advertised  
2   discovery information includes device and service information.